Applicant respectfully requests reconsideration and allowance of the subject application. Claims 1-32 are pending, of which claims 1-6, 8-9, and 11-32 have been amended. Support for the amendments can be found in the specification at least at p.4 lines 1-11, and at p.14, line 24 to p.16, line 25.

Drawing Objections

The drawings are objected to as failing to comply with 37 C.F.R §1.84(p)(5) because they include a reference number not mentioned in the description. The drawings are also objected to under 37 C.F.R. §1.83(a) for failing to show Fig. 3 as described in the specification. The drawings are also objected to under 37 C.F.R. §1.83(b) because they are incomplete (*Office Action* pp. 2-4).

A complete set of corrected, replacement drawing sheets 1-4 (for Figs. 1-4) are provided herewith in compliance with 37 C.F.R. §1.121(d). As originally filed, Fig.3 was an inadvertently omitted flow diagram, and the final figure which was intended to be designated as Fig.4 was instead incorrectly designated as Fig.3. In addition, the one flow diagram which was originally included was not clearly indicated as being Fig.2.

No new matter has been added by the corrected drawing sheets. The Office is reminded that information which was disclosed in the (a) specification, (b) claims, or (c) drawings as originally filed does not constitute new matter (MPEP §§608.04; 2163.06; and 2163.07(a)).

Corrected Fig.3 merely conforms the drawings to the specification, as the flow diagram of corrected Fig.3 is described in detail in the specification as originally filed. For example, the "Brief Description of Drawings" indicates that

"Fig. 3 is a flow diagram depicting an exemplary filtering process to process an input message" (*Specification* p.3). The "Exemplary Methodological Implementation" illustrated in Fig. 3 is described in detail on page 16 of the specification, and includes reference numbers which refer to the various blocks of the flow diagram shown in corrected Fig.3 (*Specification* p.16).

Corrected Fig.4 also merely conforms the drawings to the specification, as corrected Fig.4 is described in detail in the specification as originally filed. For example, the "Brief Description of Drawings" indicates that "Fig. 4 is a diagram of an exemplary computing environment in which the implementations described herein may operate" (*Specification* p.3). The "Exemplary Computer Environment" illustrated in Fig.4 is described in detail on pages 17-22 of the specification, and includes reference numbers which refer to the various components shown in corrected Fig.4 (*Specification* p.16). As originally filed, the drawing which is now provided as corrected Fig.4 was incorrectly designated as Fig.3, and appropriate correction has been made.

Corrected Fig.2 also merely conforms the drawings to the specification, as corrected Fig.2 is described in detail in the specification as originally filed. Corrected Fig.2 includes only a minor revision to clearly designate the drawing as being Fig.2. The "Exemplary Methodological Implementation" illustrated in Fig.2 is described in detail on pages 14-16 of the specification, and includes reference numbers which refer to the various blocks of the flow diagram shown in corrected Fig. 2 (*Specification* pp. 14-16).

Accordingly, Applicant requests that the drawing objections be withdrawn.

35 U.S.C. §112 Claim Rejections

A. Claims 1-6, 8, 11-14, 23-29, and 32 are rejected under 35 U.S.C. §112 second paragraph, as being indefinite (*Office Action* p.4). Specifically, the Office indicates that the term "optimized" is a relative term that renders the claims indefinite. Without conceding the propriety of the stated rejection, amendments to claims 1-6, 8, 11-14, 23-29, and 32 have been provided herein to distinctly claim the subject matter. The amendments are fully supported under 35 U.S.C. §112, 1st paragraph, at least at page 7, lines 7-14 and at page 9, lines 12-18 of the specification as-filed.

B. Claims 3-6 and 8 are also rejected for terms lacking sufficient antecedent basis and/or for indefinite terms. Appropriate amendments have been provided herein. Accordingly, Applicant requests that the §112 rejections be withdrawn.

35 U.S.C. §101 Claim Rejection

Claims 15-22 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter (*Office Action*, p.6). Appropriate amendments have been provided herein and Applicant requests that the §101 rejection be withdrawn.

35 U.S.C. §102 Claim Rejection

Claims 1-32 are rejected under 35 U.S.C. §102(b) as being anticipated by a publication entitled "Efficient Filtering of XML Documents for Selective Dissemination of Information" by Mehmet Altinel, et al., 26th VLDB Conference, Cairo, Egypt, dated 2000 (*hereinafter,* "Altinel") (*Office Action* p.7). Applicant respectfully traverses the rejection.

Claim 1 recites a method, comprising:

receiving an input;

determining whether the input can be processed by a selective sub-engine which supports only a subset of a query language; and

if the determining indicates that the input can be processed by the selective sub-engine, then directing the input to the selective sub-engine for processing, since the selective sub-engine can process the input in less time than a general sub-engine which fully supports the query language would require to process the input;

if the determining indicates that the input cannot be processed by the selective sub-engine, then directing the input to the general sub-engine for processing; and

processing the input to derive a result.

Altinel does not show or disclose each and every element recited in claim 1. For example, Altinel does not show or disclose "determining whether the input can be processed by a selective sub-engine which supports only a subset of a query language", as recited in claim 1.

Instead, Altinel describes using index organizations and search algorithms for performing efficient filtering of XML documents for large-scale information dissemination systems (*Altinel*, Abstract). The system of Altinel includes (1) an event-based parser for incoming XML documents; (2) an XPath parser for user profiles; (3) a filter engine, which performs the matching of documents to the profiles; and (4) a dissemination component, which sends the filtered data to the appropriate users (*Altinel* p.56, second full paragraph).

As shown in Fig. 2 of Altinel, the described system uses a single filter engine which contains a single inverted index (*i.e.*, a sophisticated index structure called the "Query Index") (*Altinel* p.56 fifth full paragraph; Fig.2). Altinel describes that the "heart" of the system is the single filter engine, which relies on an index structure and a modified Finite State Machine (FSM) approach to quickly locate and check relevant profiles (*Altinel*, p. 56, third full paragraph).

The Office cites to Altinel pages 55-57 (*Office Action*, p.7). However, the cited section of Altinel does not show or disclose "determining whether the input can be processed by a selective sub-engine which supports only a subset of a query language", as recited in claim 1. Instead, this section of Altinel describes that "[w]hen a document arrives at the Filter Engine, it is run through and XML Parser which then drives the process of checking for matching profiles in the Index" (*Altinel* p.57, §4.2, first paragraph, underline added).

Altinel does not show or disclose a selective sub-engine which supports only a subset of a query language, but instead only describes an index to locate relevant profiles in the single filter engine (*Altinel*, p.56 Fig. 2 and third full paragraph). Accordingly, Altinel does not show or disclose "determining whether the input can be processed by a selective sub-engine which supports only a subset of a query language", as recited in claim 1.

Further, Altinel does not show or disclose that "if the determining indicates that the input can be processed by the selective sub-engine, then directing the input to the selective sub-engine for processing in less time than would be required by a general sub-engine which fully supports the query language", as recited in claim 1.

The Office cites to Altinel pages 55-56, §3, ¶4 (*Office Action* p.7). However, the cited section of Altinel instead relates to using "triggers" in

traditional database systems, and states that "triggers solutions are typically not optimized for fast matching of individual items to vast numbers of relatively simple queries" (*Altinel*; pp. 55-56, §3, ¶4). Accordingly, Altinel does not show or disclose "directing the input to the selective sub-engine for processing in less time than would be required by a general sub-engine which fully supports the query language", as recited in claim 1.

Still further, Altinel does not show or disclose that "if the determining indicates that the input cannot be processed by the selective sub-engine, then directing the input to the general sub-engine for processing", as recited in claim 1. As described herein, Altinel does not show or disclose a selective sub-engine which supports only a subset of a query language, but instead only an index to locate relevant profiles in a single filter engine (*Altinel* p.56 third full paragraph; Fig.2). Accordingly, Altinel cannot show or disclose that "if the determining indicates that the input cannot be processed by the selective sub-engine, then directing the input to the general sub-engine for processing", as recited in claim 1. The system described in Altinel only describes the use of a single filter engine which contains a single sophisticated index structure called the "Query Index" (*Altinel* p.56 fifth full paragraph; Fig.2).

Accordingly, claim 1 along with dependent claims 2-7 are allowable over Altinel for at least these reasons and Applicant requests that the §102 rejection be withdrawn.

Claim 8 recites a filter engine, comprising:

at least one selective sub-engine configured to accept an input and process the input against a filter table associated with the selective sub-engine, wherein the selective sub-engine is configured to process only a subset of terms of an input language;

a general sub-engine configured to accept an input and process the input against a filter table associated with the general sub-engine, wherein the general sub-engine is configured to process only all terms of the input language; and

an analyzer configured to determine whether the input can be processed by the selective sub-engine and, if so, directing the input to the selective sub-engine for processing or, if not, directing the input to the general sub-engine for processing.

Altinel does not show or disclose each and every element recited in claim 8. For example, Altinel does not show or disclose "at least one selective sub-engine configured to accept an input and process the input against a filter table associated with the selective sub-engine, wherein the selective sub-engine is configured to process only a subset of terms of an input language" as recited in claim 8. As described above in response to the rejection of claim 1, Altinel appears to rely on a single general filter engine for processing (*Altinel* p.56 third full paragraph; Fig.2). Accordingly, Altinel does not show or disclose "at least one selective sub-engine configured to accept an input and process the input against a filter table associated with the selective sub-engine, wherein the selective sub-engine is configured to process only a subset of terms of an input language", as recited in claim 8.

Further, Altinel does not show or disclose "an analyzer configured to determine whether the input can be processed by the selective sub-engine and, if so, directing the input to the selective sub-engine for processing or, if not,

directing the input to the general sub-engine for processing", as recited in claim 8. As described above in response to the rejection of claim 1, Altinel does not show or disclose a selective sub-engine which supports only a subset of a query language, but instead describes an index to locate relevant profiles in a single filter engine (*Altinel* p.56 third full paragraph; Fig.2). Accordingly, Altinel cannot show or disclose "an analyzer configured to determine whether the input can be processed by the selective sub-engine and, if so, directing the input to the selective sub-engine for processing or, if not, directing the input to the general sub-engine for processing", as recited in claim 8.

Accordingly, claim 8 along with dependent claims 9-14 are allowable over Altinel for at least these reasons, and Applicant requests that the §102 rejection be withdrawn.

Claim 15 recites: One or more computer-readable storage media containing computer-executable instructions that, when executed on a computer, perform the following steps:

determining an appropriate sub-engine to which an input message should be directed for processing against a set of queries;

processing the input message in a selective sub-engine if the selective sub-engine comprises a grammar that supports processing of the input message;

processing the input message in a general sub-engine if the selective sub-engine grammar does not support processing of the input message; and wherein:

the input message is in accordance with a query language;

the selective sub-engine supports a subset of the query language; and

the general sub-engine supports the entire query language.

Altinel does not show or disclose each and every element recited in claim 15. For example, Altinel does not show or disclose "determining an appropriate sub-engine to which an input message should be directed for processing against a set of queries" as recited in claim 15. As described above in response to the rejection of claim 1, Altinel describes a single general filter engine for processing (*Altinel* p.56 third full paragraph; Fig.2). Accordingly, Altinel does not show or disclose "determining an appropriate sub-engine to which an input message should be directed for processing against a set of queries" as recited in claim 15.

Further, since Altinel relies on a single general filter engine for processing, Altinel does not show or disclose "processing the input message in a selective

sub-engine if the selective sub-engine comprises a grammar that supports processing of the input message" and "processing the input message in a general sub-engine if the selective sub-engine grammar does not support processing of the input message", as recited in claim 15.

Accordingly, claim 15 along with dependent claims 16-22 are allowable over Altinel for at least these reasons, and Applicant requests that the §102 rejection be withdrawn.

Claim 23 recites a message processing system, comprising:

means for receiving a message;

a selective sub-engine which supports only a subset of a message language;

a general sub-engine which supports all of the message language;

analyzing means for analyzing the message to determine if the selective sub-engine is configured to process the message;

distribution means for distributing the message to the selective sub-engine if the selective sub-engine can process the message or to the general sub-engine if the selective sub-engine cannot process the message.

Altinel does not show or disclose each and every element recited in claim 23. For example, Altinel does not show or disclose "a selective sub-engine which supports only a subset of a message language" and "a general sub-engine which supports all of the message language", as recited in claim 23. Instead, as described herein, Altinel appears to rely on a single general filter engine for

processing (*Altinel* p.56 third full paragraph; Fig.2). Further, Altinel does not show or disclose an "analyzing means for analyzing the message to determine if the selective sub-engine is configured to process the message", as recited in claim 23.

Accordingly, claim 23 along with dependent claims 24-32 are allowable over Altinel for at least these reasons, and Applicant requests that the §102 rejection be withdrawn.

Conclusion

Pending claims 1-32 are in condition for allowance and Applicant respectfully requests issuance of the subject application. If any issues remain that preclude issuance of the application, the Examiner is urged to contact the undersigned attorney before issuing a subsequent Action.

Respectfully Submitted,

Dated: Nov. 8, 2006   By: _David A. Morasch_

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